

## PROJECT DESCRIPTION

## EQUIPMENT LIST

## EQUIPMENT LIST (CONT.)

## I. GENERAL

This project involves the modification of two existing Traffic Control Signals with street lighting and interconnect at the intersections of MD 28 (W. Montgomery Avenue) and Research Blvd / Crofton Hill La and MD 28 (W. Montgomery Avenue) and Hurley Avenue and also Crofton Hill Lane in Montgomery County. These modification are due to geometric improvements. MD 28 (W. Montgomery Avenue) is assumed to run an east-west direction.

## II. INTERSECTION OPERATION

MD 28 (W. Montgomery Avenue) and Research Blvd / Crofton Hill Lane

- This intersection is to operate in a NEMA six-phase, semi-actuated mode, with the MD 28 (W. Montgomery Avenue) approaches continuing to run concurrently. Exclusive/Permissive left turn phases shall remain in operation for both approaches of MD 28 (W. Montgomery Avenue). A pedestrian phase with pushbutton actuation shall continue to be provided across the west leg of MD 28 (W. Montgomery Avenue). A new pedestrian phase with pushbutton actuation shall be provided across the MD 28 (W. Montgomery Avenue) westbound right turn ramp. The pedestrian phases across Research Blvd and Crofton Hill Lane shall remain on recall. Farside sampling stations shall remain in use on both legs of MD 28 (W. Montgomery Avenue) at this intersection. The Research Blvd and Crofton Hill Lane approaches shall continue to run as a split phase. A new right turn overlap phase shall be provided for the westbound approach of MD 28 (W. Montgomery Avenue).

- A full-traffic-actuated, eight-phase controller housed in a NEMA size "6" base-mounted cabinet shall remain in use at this intersection.

MD 28 (W. Montgomery Avenue) and Hurley Avenue

- There shall be no change in phasing at this intersection.

- A full-traffic-actuated, eight-phase controller housed in a NEMA size "6" base-mounted cabinet shall remain in use at this intersection.

## III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- Disconnecting interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Mr. Bob Gonzales at (240) 777-8761 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

The contact persons for District #3 are as follows:

Mr. Majid Shakib  
Assistant District Engineer - Traffic  
Phone: (301) 513-7358

Mr. Randy Brown  
Assistant District Engineer - Maintenance  
Phone: (301) 513-7304

Mr. Augie Rabish  
Assistant District Engineer - Utility  
Phone: (301) 513-7350

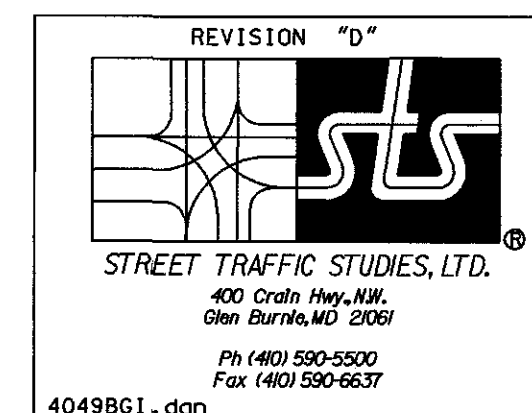
Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone: (410) 787-7630

## A. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

SPEC. NUMBER	DESCRIPTION	QUANTITY
814	12", one-way, three-section (R,Y,G) traffic signal head having proper span wire hangers, balance adjusters and tunnel visors.	5 EA
814	12", one-way, three-section (RA,YA,GA) traffic signal head having proper span wire hangers, balance adjusters and tunnel visors.	4 EA
814	12", one-way, four-section (R,Y,G,A,G) (left arrow) traffic signal head having proper span wire hangers, balance adjusters and tunnel visors.	2 EA
814	12", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.	2 EA
814	12", one-way, two-section (DW,W) symbolic pedestrian signal head with adjustable bracket for pole mounting and outway visors.	2 EA
814	12", one-way, two-section (DW,W) symbolic pedestrian signal head having proper post top adapter for pedestal mounting and outway visors.	1 EA
817	Furnish and install pushbutton and pedestrian education sign R10-4(1). (Note: Sign to read "PUSHBUTTON TO CROSS MD 28".)	2 EA
205	Test pit excavation.	3 C.Y.
801	Furnish and install concrete for signal foundation.	7 C.Y.
813	Ground mounted sheet aluminum signs to consist of:	23 S.F.
	M6-2 "arrow (symbolic)" right diagonal sign, (15" x 21") ground mounted.	1 Each
	M6-2 "arrow (symbolic)" left diagonal sign, (15" x 21") ground mounted.	1 Each
	W11-2 "PEDESTRIAN CROSSING (SYMBOLIC)" sign, (30" x 30") ground mounted with hardware	2 Each
	W13-4 "ACROSS RAMP" sign, (24"x36") ground mounted.	1 Each
813	Overhead mounted sheet aluminum sign consisting of:	32.5 S.F.
	R10-11b "NO TURN ON RED" sign, (24"x24") mast arm mounted.	1 Each
	R3-6 "LEFT TURN AND THRU" sign, (30" x 36") span wire mounted.	1 Each
	R3-5R "RIGHT TURN ONLY" sign, (30" x 36") span wire mounted.	1 Each
	R3-7(1) "RIGHT LANE MUST TURN RIGHT" AT RESEARCH BLVD"sign, (30" x 42") span wire mounted.	1 Each
	W11-2 "PEDESTRIAN CROSSING (SYMBOLIC)" sign, (30" x 30") mast arm mounted.	1 Each
951	5" white heat applied permanent preformed thermoplastic pavement marking	2580 L.F.
951	5" yellow heat applied permanent preformed thermoplastic pavement marking	2380 L.F.
951	12" white heat applied permanent preformed thermoplastic pavement marking	815 L.F.
951	24" white heat applied permanent preformed thermoplastic pavement marking	270 L.F.
951	Furnish and install heat applied permanent preformed thermoplastic pavement marking arrow, (right)	6 EA
951	Furnish and install heat applied permanent preformed thermoplastic pavement marking "ONLY"..	3 EA

## A. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

SPEC. NUMBER	DESCRIPTION	QUANTITY
815	Saw cut for signal (loop detector).	880 L.F.
805	1" galvanized steel electrical conduit (detector wire sleeve)	35 L.F.
805	1" liquid tight flexible non-metallic conduit for detector sleeve.	40 L.F.
805	Furnish and install 3" schedule 80 rigid polyvinyl chloride conduit - trenched	50 L.F.
805	Furnish and install 4" schedule 80 rigid polyvinyl chloride conduit - bored.	65 L.F.
811	Furnish and install electrical handhole.	2 EA
810	Furnish and install loop wire encased in flexible tubing (No. 14 AWG).	2500 L.F.
	Canoga 4-conductor electrical cable (No. 14 A.W.G.) (shielded).	2015 L.F.
810	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.).	555 L.F.
810	Furnish and install 3-conductor electrical cable (No. 14 A.W.G.).	350 L.F.
810	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).	1925 L.F.
810	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).	480 L.F.
810	Furnish and install ground rod -3/4" x 10'.	2 EA
810	Furnish and install No. 6 AWG stranded bare copper ground wire.	50 L.F.
	Remove existing ground or overhead mounted sign	6 EA
	Relocate existing overhead or ground mounted sign	2 EA
	Remove existing handhole	1 EA
812	Furnish and install wood sign supports (4"x4").	35 L.F.
863	4-channel, rack mount loop detector amplifier. (To be installed into the existing pole-mounted cabinet S.H.A. Signal Shop Forces).	2 EA
819	Furnish and install 1/4" tether wire.	230 L.F.
819	Furnish and install steel span wire, 3/8" diameter.	230 L.F.
822	Remove existing traffic signal head.	10 EA
	Remove and dispose of existing span wire.	2 EA
	Remove and dispose of existing steel strain pole.	1 EA
	Cut, clean and cap mast arm / steel pole.	1 EA
	Remove and dispose of existing foundation 12" below grade.	1 EA
	Furnish and install 10' breakaway pedestal pole with transformer base.	1 EA
	Furnish and install 27' steel pole pole and 50' (cut to 40') mast arm.	1 EA
	Remove existing pedestrian signal head.	1 EA
818	Furnish and install 30' steel strain pole.	1 EA



**MARYLAND DOT - STATE HIGHWAY ADMINISTRATION**  
**Office of Traffic & Safety**

**TRAFFIC ENGINEERING DESIGN DIVISION**  
1.) MD 28 (W. MONTGOMERY AVE) AND RESEARCH BLVD  
2.) MD 28 (W. MONTGOMERY AVE) AND HURLEY AVE  
**GENERAL INFORMATION SHEET**

DRAWN BY: <b>ROB CICCHINI</b>	F.A.P. NO. <b>BW996M82</b>	TS NO. <b>858 G1-2</b>	SHEET NO. <b>4 OF 5</b>
CHECKED BY: <b>R. ZACHERL</b>	S.H.A. NO. <b>MONTGOMERY</b>	T.I.M.S. NO. <b>F063</b>	
SCALE: <b>NONE</b>	COUNTY: <b>MONTGOMERY</b>	LOG MILE: <b>15002820.48</b>	

DATE: **10/17/02**